

What is claimed is:

1. An image change detecting apparatus comprising:

a differentiating device for twice differentiating a value of an image signal corresponding to a plurality of line-pixels on a single predetermined line, of pixels forming a single static image; and

a detecting device for detecting a part sequentially changing in concentration in a partial image including the plurality of line-pixels, the partial image being a part of the static image, when the twice differentiated result is zero.

2. The image change detecting apparatus according to Claim 1, wherein the image signal is at least one of a chrominance signal and a luminance signal corresponding to the line-pixels.

3. The image change detecting apparatus according to Claim 1, wherein the line is in parallel to any one of horizontal direction and vertical direction.

4. The image change detecting apparatus according to Claim 2, wherein the line is in parallel to any one of horizontal direction and vertical direction.

5. The image change detecting apparatus according to Claim 1, wherein the static image is a part of moving image information to be coded by an MPEG (Moving Picture Experts Group) system.

6. The image change detecting apparatus according to Claim 2, wherein the static image is a part of moving image information to be coded by an MPEG (Moving Picture Experts Group) system.

7. The image change detecting apparatus according to Claim 3, wherein the static image is a part of moving image information to be coded by an MPEG (Moving Picture Experts Group) system.

8. The image change detecting apparatus according to Claim 4, wherein the static image is a part of moving image information to be coded by an MPEG (Moving Picture Experts Group) system.

9. The image change detecting apparatus according to Claim 5, wherein the partial image is a macro block in the MPEG system.

10. The image change detecting apparatus according to Claim 6, wherein the partial image is a macro block in the MPEG system.

11. The image change detecting apparatus according to Claim 7, wherein the partial image is a macro block in the MPEG system.

12. The image change detecting apparatus according to Claim 8, wherein the partial image is a macro block in the MPEG system.

13. An image coding apparatus comprising:

(i) an image change detecting apparatus comprising:

a differentiating device for twice differentiating a value of an image signal corresponding to a plurality of line-pixels on a single predetermined line, of pixels forming a single static image; and

a detecting device for detecting a part sequentially changing in concentration in a partial image including the plurality of line-pixels, the partial image being a part of the static image, when the twice

differentiated result is zero; and

(ii) a coding device for, when detecting the partial image sequentially changing in concentration, changing coding parameter in coding of the detected partial image to code the partial image.

14. The image coding apparatus according to Claim 13, wherein the image signal is at least one of a chrominance signal and a luminance signal corresponding to the line-pixels.

15. The image coding apparatus according to Claim 13, wherein the line is in parallel to any one of horizontal direction and vertical direction.

16. The image coding apparatus according to Claim 13, wherein the static image is a part of moving image information to be coded by an

5 MPEG (Moving Picture Experts Group) system.

17. The image coding apparatus according to Claim 13, wherein the partial image is a macro block in the MPEG system.

18. An image change detecting method, comprising:

10 a differentiating process for twice differentiating a value of an image signal corresponding to a plurality of line-pixels on a single predetermined line, of pixels forming one static image; and

15 a detecting process for detecting a part sequentially changing in concentration in a partial image including the plurality of line-pixels, the partial image being a part of the static image, when the twice differentiated result is zero.

19. An information recording medium with an image change detecting program recorded readable by a computer, which is included in an image change detecting apparatus, wherein the program causes the computer to function as:

20 a differentiating device for twice differentiating a value of an image signal corresponding to a plurality of line-pixels on a single predetermined line, of pixels forming one static image; and

25 a detecting device for detecting a part sequentially changing in concentration in a partial image including the plurality of line-pixels, the partial image being a part of the static image, when the twice differentiated result is zero.

20. A computer data signal embodied in a carrier wave and representing a series of instructions, which cause a computer to provide an image change detection by performing:

5 a differentiating process for twice differentiating a value of an image signal corresponding to a plurality of line-pixels on a single predetermined line, of pixels forming one static image; and

10 a detecting process for detecting a part sequentially changing in concentration in a partial image including the plurality of line-pixels, the partial image being a part of the static image, when the twice differentiated result is zero.